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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/072,412	05/04/1998	STEPHEN R. SCHWARTZ	15381	6519

7590 07/31/2002
KENYON & KENYON
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SAN JOSE, CA 95110

EXAMINER

PENDLETON, BRIAN T

ART UNIT	PAPER NUMBER
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2644

DATE MAILED: 07/31/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/072,412

Applicant(s)

SCHWARTZ, STEPHEN R.

Examiner

Brian T. Pendleton

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 May 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 13-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 13-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☒ Interview Summary (PTO-413) Paper No(s). 19
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other:

DETAILED ACTION

Response to Arguments

Applicant's arguments with respect to claims 1-5 and 13-15 have been considered but are moot in view of the new ground(s) of rejection. An interview was conducted with the Applicant, upon which a paper #18 was filed. The Office is treating that paper as a response to the Non-Final Office Action sent on 4/25/02. The "Draft Claims for Discussion Purposes" are not considered new claims.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kehoe, US Patent 5,765,134. Kehoe discloses a method of electronically altering a speaker's emotional state comprising inputting a voice signal into a microphone 1, altering the signal through an effects processor 5 and outputting the signal through earphones 6. The effects processor 5 uses various techniques to alter the signal including equalization, delay, reverb, distortion, etc. (see column 4 line 40 – column 5 line 53). The principle of the invention is to change the voice signal from that which is picked-up by the microphone into the "ideal" signal to be heard by the user. The processor 5 can be programmed with voice effects at a manufacturer or by the user and stored in memory. Therefore, the general teaching of having a specific equalizer

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designed to compensate for the actual signal received by a microphone and the reference sound of the sound producer was known. In respect to the claims, the acoustic instrument is the human voice, the reference sounds are that of a confident person, happy person, deep voiced person, etc. Applying this teaching to other acoustic instruments, one of ordinary skill in the art would have realized that instruments do not always sound as intended and the most optimal method of achieving the intended sound would have been to also use an equalizer, which could be programmed for each specific instrument, as the processor 5 of Kehoe is programmed for each specific speaker. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to use the teaching of Kehoe for an acoustic instrument. Per claim 2, in utilizing the teaching of Kehoe for acoustic instruments, the microphone would be attached to the instrument. As to claims 3 and 4, the goal of the Kehoe apparatus is to alter the emotional state of a speaker's voice, therefore, without undue experimentation, an user would have been prepared to listened to his/her voice through the earphones 6 and change the settings of the equalizer to compensate for the differences between the voice signal heard and the voice signal desired (reference signal). Regarding claim 5, the equalizer has setting ranges which are appropriate for a range of voices.

Claims 1-5 and 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davis, US Patent 4,311,872. Davis discloses a portable voice communication system (throat microphone) comprising a microphone 26, amplifier/equalizer 34, and speaker 110. The system is used by placing the microphone to the voice box of an user

and amplifying the signal for output. Such a system is used for communication between individuals wearing air breathing equipment with face masks. As disclosed in the abstract, the amplifier conditions the input signal by using a variable reactive negative feedback network that corrects the phase shift of lower frequency components and emphasizes higher frequency components in an attempt to make the speech output sound more intelligible. A speech signal from an individual is equalized using the circuit elements to sound more understandable since the use of a face mask distorts the signal. Therefore, the general teaching that a picked-up voice signal can be equalized to sound more like a reference sound (the speaker's actual voice) using an equalizer was well known in the art, as evidenced by Davis. It would have been obvious to one of ordinary skill in the art at the time of invention to apply this teaching to musical instruments since the sound picked-up by microphones around musical instruments are different from the actual sounds that are played. In light of Davis, an equalizer would have been the most efficient method for compensating for the differences between the sounds being picked up to that actually played. Claim 1 is met. Per claim 2, since Davis discloses placing the microphone on the throat of the user, it was obvious to attach a microphone on an acoustic musical instrument to pick-up its sounds. Regarding claims 3 and 4, the equalizer 34 of Davis was programmed with specific electrical components to make the picked-up voice sound more like the actual voice of the user, therefore one of ordinary skill in the art would have had to compare the voice signals output by speaker 110 to that normally heard in a normal environment. Thus, one would have compared the picked-up sounds to reference sounds by listening.

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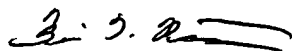
Regarding claim 5, the equalizer has setting ranges which are appropriate for a range of voices, since its goal is to make all voices seem more intelligible. During setting of the equalizer component values one of ordinary skill would have used different voices to find a range of values. Per claim 13, the reference sounds are directly from the user. As to claim 14, applying the teaching of Davis to an instrument, the microphone would be attached to the instrument. Per claim 15, using digital filters would have been more reliable and quicker, therefore one would have been motivated to use them.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian T. Pendleton whose telephone number is (703) 305-9509. The examiner can normally be reached on M-F 7-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Forester W. Isen can be reached on (703) 305-4386. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.



Brian Tyrone Pendleton
July 29, 2002



FORESTER W. ISEN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600